

V. Claims

[0018] What is claimed is:

1. A vacuum cleaner filter cartridge for a vacuum cleaning machine, comprising:

5 a cartridge body having an inlet and an outlet;

a first fan folded, single ply or multi layered filter for filtering air disposed therein between the said inlet and outlet portions of the cartridge body shell;

10 a pair of shells forming said cartridge and holding the fan-folded said filter paper;

said cartridge having a top cover shell which receives the inlet aperture;

said cartridge having a lower cover shell which containing the outlet aperture.

15 Said top shell and said lower shell being generally square in cross section with two adjacent large radius corners and two adjacent small radius corners

20 2. A filter cartridge as in claim 1, wherein said outside cartridge has an outside length dimension of less than 11.80 inches (300 mm) and greater than 11.17 inches (284 mm).

3. A filter cartridge as in claim 1, wherein said cartridge has an outside width dimensions of less than 5.70 inches (145 mm) and greater than 5.07 inches (128 mm).

4. A filter cartridge as in claim 1, wheretwo adjacent, longitudinal radii are less than 0.50 inches (12.7 mm) and greater than 0.40 inches (10.2 mm).
5. A filter cartridge as in claim 1 wherein two said adjacent, longitudinal radii are less than 0.125 inches (3.2 mm) and greater than 0.075 inches (1.9 mm).
6. A filter cartridge as in claim 1, wherein said inlet is less than 1.26 inches (32 mm) and greater than 1.16 inches (29.5 mm).
- 10 7. A filter cartridge as in claim 1, wherein said outlet is less than 1.95 inches (49.5 mm) and greater than 1.85 inches (47 mm).
8. A filter cartridge as in claim 1, wherein; said fan-folded filter media contains at least one layer of filter media.
- 15 9. A filter cartridge as in claim 8 wherein said filter is rated as a HEPA filter.
10. A filter cartridge as in claim 8 wherein said filter is rated as an ULPA filter.
- 20 11. A filter cartridge as in claim 8 wherein said fan folded filter includes at least 25 pleats.
12. A filter cartridge as in claim 8 wherein said fan folded filter contains pleats at least .75 inches (19.05 mm) in depth.
- 25 13. A vacuum cleaner filter cartridge for a vacuum cleaning machine, comprising:

a cartridge body having an inlet and an outlet;

at least a single layered fan folded filter for filtering air disposed therein between the said inlet and outlet portions of the cartridge body shell;

5 a pair of shells forming said cartridge and holding the fan-folded said filter paper;

said cartridge having a top cover shell which receives the inlet aperture;

10 said cartridge having a lower cover shell which containing the outlet aperture;

Said cartridge having an outside length dimension is less than 11.80 inches (300 mm) and greater than 11.17 inches (284 mm);

15 Said cartridge having an outside width dimensions less than 5.70 inches (145 mm) and greater than 5.07 inches (128 mm);

Said cartridge having two adjacent, longitudinal radii are less than 0.50 inches (12.7 mm) and greater than 0.40 inches (10.2 mm);

20 Said cartridge having two adjacent, longitudinal radii are less than 0.125 inches (3.2 mm) and greater than 0.075 inches (1.9 mm).

14. A filter cartridge as in claim 13, wherein; a functional fit exists within vacuum cleaning machines manufactured by at least 3 different manufacturers.

15. A filter cartridge as in claim 14, wherein said manufacturers are selected from the group consisting of;

5 a) Atrix International, Inc.: Omega, Omega Supreme, UltiVac, UltiVac DLX, Menda Vac

b) The 3M Corporation: service vacuum cleaner models 497AJ, 497AB, 497AJH, 497ABD, 497AJK, 497AJM

c) Laservac, an Eltrex Company: The Shark 9000 series II

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